No.



9600361

## THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS; SHALL COME:

Resource Seeds, Inc.

There has been presented to the

## Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED. OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE ITTLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW

NOW THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE. OR USING IT IN RODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY TECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

#### TRITICALE

'498'

In Testimonn Thereof, I have hereunto set my hand and caused the seal of the Hunt Unristy Protection Office to be affixed at the City of Washington, D.C. this thirtieth day of January, in the year two thousand three.

Attest:

Pamyhe.

Commissioner Plant Variety Protection Office Agricultural Marketing Service Herener-Hericulture U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Resource Seeds, Inc.			2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME XT498		1	RIETY NAME 198		
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)			5. TELEPHONE (include a	rea code)		OR OFFICIAL USE ONLY		
2280 Hecker Pass High	way				408/847-10			
Gilroy, California 9502	0			٠			1	NUMBER
11				•	6. FAX (include area code	,	76	00361
					408/847-0	004	FILING	DATE
7. IF THE OWNER NAMED IS NOT A TO ORGANIZATION (COrporation, partner Corporation)	rship, association, etc.)	TATE	E OF INC	rated give corporation litornia	9. DATE OF INCORPORA October 1		Au	gust 30, 1991
10. NAME AND ADDRESS OF OWNER	REPRESENTATIVE(S) TO SERVE IN T	'HIS APPLICA'	TION (F.	irst person listed will re	eceive all papers)		FIL	ING AND EXAMINATION
Dr. George Fohner							E	ES:
Resource Seeds, Inc.							S S	2450.00
P.O. Box 1319							E S S C DA	TE 8/12/1996
Gilroy, CA 95021							ī 💳	
							V CER	RTIFICATION FEE:
	, <b>a</b>						s 3	320.00
				•			:	- 4/11/2003
17. TELEPHONE (Include area code)	12. FAX (Include area code)	] ,	13. E-M	An		44 0000	DAT	-/-/-
•						14. CROP	KIND (Con	mmon Name)
408/847-1051	408/847-0604	4	· •	george@resour	ceseeds.com	Tritica	ale	
18. CHECK APPROPRIATE BOX FOR EAC	CH ATTACHMENT SUBMITTED (Follow	r instructions o						
\(\overline{\chi_2}\)				CERTIFIED SE	WER SPECIFY THAT SEED ( See Section 63(a) of	the Plant Varie	ely Prolect	DLD AS A CLASS OF ion Ad)
a. Exhibit A. Ongin and Breedin	•			YES	(II "yes", answer items 20 nd 21 below)	(⊠ "	10 (If "no,"	go to žem 22)
b. Exhibit B. Statement of Distir			i		NER SPECIFY THAT SEED O	r mue		
c Exhibit C. Objective Descripti				VARIETY BE LI	MITED AS TO NUMBER OF C	LASSES?	YES	, — NO
d Exhibit D. Additional Descript			1	IF YES, WHICH	CLASSES? L FOUNDAT	TION   RE	GISTERE	D GERTFIED C
Exhibit E. Statement of the Ba	asis of the Owner's Ownership			21 DOES THE OW	NER SPECIFY THAT THE CL	CEEE DE		
repository)	untreated seeds or, for tuber propagate will be depositied and maintained in an a	ed varieties. approved publi	c	LIMITED AS TO	NUMBER OF GENERATIONS	COCO DE	YES	<del></del>
9 Filing and Examination Fee (\$2 States* (Mail to the Plant Varie	2,450), made payable to Treasurer of the	ne United		IF YES, SPECIFY THE NUMBER 1, 2, 3, etc. FOUNDATION REGISTERED CERTIFIE				ED CERTIFIED
	ry Prolection Office)			(If additional expl	lanation is necessary, please u	se the space i	ndicated o	n the reverse )
22. HAS THE VARIETY (INCLUDING ANY HA FROM THIS VARIETY BEEN SOLD, DISF OTHER COUNTRIES?	ARVESTED MATERIAL) OR A HYBRID POSED OF, TRANSFERRED, OR USED	PRODUCED IN THE U. S.	OR	23. IS THE VARIETY	OR ANY COMPONENT OF T	HE VARIETY	PROTECT	
YES	NO			YE\$	<b>`</b>	NO IXI		
IF YES, YOU MUST PROVIDE THE DATE FOR EACH COUNTRY AND THE CIRCU	OF FIRST CALE DIRECTOR TO	NSFER, OR U led on reverse.	ISE .j	IF YES, GIVE COL REFERENCE NUM	JNTRY, DATE OF FILING OR MBER. (Please use space indi	ISSUANCE AS caled on rever	ND ASSIG rse.)	NED :
<ol> <li>The owners declare that a viable sample of for a tuber propagated variety a tissue culti-</li> </ol>	basic seed of the variety will be furnish	ved with anotic:		fuil he replanished				h
The undersioned ownered interest the ac-				the duration of the cen	uficate.	i such regulali	ons as ma	у бе аррисавие, ог
The undersigned owner(s) is(are) the owner and is entitled to protection under the provi					e variety is new, distinct, unito	rm, and stable	as require	ed in Section 42,
Owner(s) is(are) informed that false represe	entation herein can jeopardize protection	n and result in	penallies	s;				
IGNATURE OF GOODER			5	SIGNATURE OF OWN	ER			
AME Prease phill or type)		·		· · · · · · · · · · · · · · · · · · ·				
George Fohner			N	IAME (Please print or t	lype)			
APACITY OR TITLE	DATE (no							
	(ne	w form)	C	APACITY OR TITLE		}	DATE	
President	9/12/00		- 1.			i		3

#### INSTRUCTIONS

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), ALL of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (in the sense that it will reproduce an entire plant) tissue culture will be deposited and maintained in an approved public repository: (4) check drawn on a U.S. bank for \$2,450 (\$300 filing fee and \$2,150 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 500, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. DO NOT use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$300 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

> Plant Variety Protection Office Telephone: (301) 504-5518 FAX: (301) 504-5291

ITEM

Homepage: http://www.ams.usda.gov/science/pvp.htm

18a. Give:

- (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method,
- (2) the details of subsequent stages of selection and multiplication:
- (3) evidence of uniformity and stability; and
- (4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 18b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
  - (1) identify these varieties and state all differences objectively;
  - (2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
  - (3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness
- 18c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely
- 18d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease
- 18e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
- 19. If "Yes" is specified (seed of this variety be sold by variety name only, as a class of certified seed), the applicant MAY NOT reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
- 22. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
- 23. See Section 5.5 of the Act for instructions on claiming the benefit of an earlier filing date.
- 22. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

USA, November 1995 Sold for seed multiplication and on-farm testing under the supervision of Resource Seeds, Inc.

23. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

OTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's epresentative during the life of the application/certificate. There is no charge for filing a change of address. The fee for filing a change of ownership or ssignment or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 7.175(h) of the Regulations and Rules of Practice.)

o avoid conflict with other variety names in use, the applicant must check the variety names proposed by contacting: Seed Branch, AMS, USDA, Room 213, uilding 306, Beltsville Agricultural Research Center-East, Beltsville, MD 20705. Telephone: (301) 504-8089.

Public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and sintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for the furnishing the following the collection of information, including suggestions for the furnishing the fu Sucing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 1630, Jamie L. Whiten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your er. Under the PRA of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

The U.S. Pepartment of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, see, religion, age, disability, poincal beliefs, and marital or familial status. (Not all discrimination in its programs on the basis of race, color, national origin, see, religion, age, disability, poincal beliefs, and marital or familial status. (Not all discrimination for the use of th hibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braile, large print, audiciage, etc.) should contact the USDA Office of program information (braile, large print, audiciage, etc.) should contact the USDA Office of program information (braile, large print, audiciage, etc.) should contact the USDA Office of program information (braile, large print, audiciage, etc.) should contact the USDA Office of program information (braile, large print, audiciage, etc.) should contact the USDA Office of programs. mmunications at (202) 720-2791. To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (702) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is ocusi opportunity employer.

1-470 (6-98) designed by the Plant Vanety Protection Office with WordPerfect 6.0a. Replaces STD-470 (03-96) which is obsolete.

### TRITICALE

"498"

## EXHIBIT A: ORIGIN AND BREEDING HISTORY

Pedigree [Daws x Snoopy] x 179-1] 6TC027

Triticale 498, a facultative type of triticale developed by Resource Seeds, Inc., is a pure line selection from the 1982 cross of octoploid triticale Daws/Snoopy with two hexaploids L179-1, and 6TC027. The octoploid triticale accession Daws/Snoopy is a USDA-Corvallis triticale breeding line developed. by Dr. Robert Metzger by crossing the public wheat variety Daws and the CIMMYT experimental rye, Snoopy. L179-1 and 6TC027 were breeding lines in The Jenkins Foundation for Research program on triticale, now owned by Resource Seeds. L179-1 was an experimental hexaploid triticale accession received by Dr. Charles Jenkins from Dr. T. Wolski, Laski Plant Breeding Station, Laski, Poland. 6TC027 was a triticale line developed by Dr. Jenkins from a cross made in 1967 described in Dr. Jenkins records as being a cross between a publicly available land race of purple wheat collected from a cultivated field in China and the triticale breeding line 6T0TXB140. His records further indicate that 6T0TXB140 was a selection from the triticale breeding population composed of bulked 6T02413 and 6T02418, both populations of which were produced from F<sub>2</sub> plant selections from the cross between the primary hexaploid triticale 6T6TXA002 and OT6TXA031. OT6TXA031 was an F<sub>2</sub> plant selection from a cross between the primary hexaploid triticale P4160(E)X6AT and the hexaploid triticale breeding line X6A274. P4160(E)X6AT was a publicly available line from a triticale collection at Michigan State University and X6A274 was a publicly available line from the collection at CIMMYT.

The cross designated XT498 was advanced by the bulk breeding method in the  $F_2$  and  $F_3$  generations. In 1984 head selections were made from the  $F_3$  bulk and grown as  $F_4$  headrows in 1985. Bulk selection XT498-6 from a single  $F_4$  head row was tested in yield trials for 3 years, and was selected for commercial development on the basis of superior grain yields.

Breeder seed of 498 was formed from a composite of 180 plant selections derived from 200 heads sampled from XT498-6 in 1988 and selected in 1989 and 1990 for uniformity of height, chaff color, and seed color.

Triticale 498 has been observed to be uniform and stable over six generations of testing in California and the southeast U.S., its primary area of commercial adaptation. During the multiplication process some taller variants have been observed at a frequency of approximately 1:4000-5000.

## TRITICALE

"498"

## EXHIBIT B: STATEMENT OF DISTINCTNESS (NOVELTY STATEMENT)

Triticale 498 is most similar to the triticale variety 2700 (PVP 9300122) in that both have a more erect spike than that of other intermediate or spring-type triticale varieties. Triticale 498 differs from 2700 in having shorter straw and earlier maturity (Tables 1 & 2). Trical 498 has an erect spike, which distinguishes it from many other triticale varieties grown in its area of adaptation.

Table 1

## Plant Height of 498 vs 2700 Triticale

	498	2700	Std Error of Mean	"t" Test Significance
South Carolina 1995	cm	***************************************	. ,	
Clemson	 99	130	2.0	p < 0.001
Florence	104	127	2.3	p < 0.001
Blackville	109	119	1.3	p < 0.001
Hollister, California				
198	<del>7</del> 128	158	NA	NA
198	8 137	166	NA	NA
1989	9 140	162	NA	NA
Gilroy, California	•			
1992	142	165	NA	NA
Knoxville, Tennessee				
1998	<del>5</del> 94	140		• .
Orange, Virginia		7		
1995	5 104	150	NA	NA
AVG	. 118	146		

Paired "t" test on means across all sites:

t = -7.55 p < 0.001

Table 2

## Heading Date of 498 vs 2700 Triticale

		498	2700	
South Carolina 19	95	Days after Mar	ch 31	
Clemson		11		25
Hollister, Californi	<b>a</b> 1988	6		10
Gilroy, California				
	1991	18		26
.•	1992	16		21
Knoxville, Tennes	see' 1995	19		28
Orange, Virginia	1995	20	1	31
AVG		15	***************************************	24
Paired "t" Test:	t = -5.5 p < 0.0			

FORM GR-470-33 (8/75)

# U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE GRAIN DIVISION HYATTSVILLE, MARYLAND 20782 OBJECTIVE DESCRIPTION OF VARIETY

TRITICALE

RESOURCE SENSET INC.  IDDRESS STREET and No., OF R.D. No., Cign, State, and ZIP Code)  O. BOX 1319, Giltoy, CA 95021  POR OFFICIAL USE ONLY  PYOP NUMBER  Q.CO.361  PLACE the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place the appropriate number that describes to the propriate of this variety in the boxes below.  Place the appropriate number that describes to the propriate of this variety in the boxes below.  Place the inflat of the propriate of the variety in the boxes below.  Place the appropriate number that describes to the propriate of th	AME OF APPLICANT(S)	VARIETY NAME OR TEMPORARY DESIGNATION
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O. Box 1319, Gilroy, CA 95021  Place the appropriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number that describes the varietal character of this variety in the boxes below.  Place a propriate number is either 99 or less or 9 or less.  3 - REECT  2	Resource Seeds, Inc.	FOR OFFICIAL USE ONLY
Place a reto in first box (*-1. 0   8   9) or (0   9) when number is either by or less or y or less.  1. GROWTH HABIT:  2. 1 = SPRING 2 = INTERMEDIATE 3 = WINTER  2. Juvenile Plant Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE 3 = ERECT  2. PLOIDY:  1. 1 = HEXAPLOID 2 = OCTOPLOID 3 = OTHER (Specify).  3. MATURITY (80% Flowering):  3. 1 = VERY EARLY 2 = EARLY 3 = MIDSEASON 4 = LATE 5 = VERY LATE  1. 1 DAYS EARLIER THAN PROSTO	O. Box 1319, Gilroy, CA 95021	PVPO NUMBER
1. GROWTH HABIT:  2    1 = SPRING   2 = INTERMEDIATE   3 = WINTER  2    Juvenile Plant Growth:   1 = PROSTRATE   2 = SEMIPROSTRATE   3 = ERECT  2    Photoperiod:   1 = INSENSITIVE   2 = SENSITIVE  2. PLOIDY:  1    1 = HEXAPLOID   2 = OCTOPLOID   3 = OTHER (Specify)  4    2    2n CHROMOSOME NUMBER  3. MATURITY (50% Flowering):  3    1 = VERY EARLY   2 = EARLY   3 = MIDSEASON   4 = LATE   5 = VERY LATE  1    1    DAYS EARLIER THAN PRESTO.	Place the appropriate number that describes the varietal character of this variety in	the boxes below.
2   1 = SPRING 2 = INTERMEDIATE 3 = WINTER  2   Juvenile Plant Growth: 1 = PROSTRATE 2 = SEMIPROSTRATE 3 = ERECT  2   Photoperiod: 1 = INSENSITIVE 2 = SENSITIVE  3   CHEAPLE   CHEAPL		or youress.
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3. MATURITY (50% Flowering):  3	<del></del>	
1 = VERY EARLY 2 = EARLY 3 = MIDSEASON 4 = LATE 5 = VERY LATE  1 1 DAYS EARLIER THAN PRESTO	4 2 2n CHROMOSOME NUMBER	
1 = VERY EARLY 2 = EARLY 3 = MIDSEASON 4 = LATE 5 = VERY LATE  1 1 DAYS EARLIER THAN PRESTO	3 MATURITY (50% Flowering):	
7 DAYS LATER THAN Florico		LATE S = VERY LATE
4. HEIGHT:  1 0 5 CM. HIGH IN SOUTHEAST U.S.  1 1 DWARF 2 SEMIDWARF 3 SHORT  4 4 MIDTALL 5 TALL  1 0 CM. SHORTER THAN Florico 1 = CARMACK 2 = ROSNER 3 = PATHFINDER  CM. TALLER THAN 4 = 6TA 204 5 = ARAMADILLA  5. PLANT COLOR AT BOOT STAGE:  2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN  6. STEM:  2 Anthocyanin: 1 = ABSENT 2 = PRESENT  2 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE 4 = HEAVY  2 Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:	1 1 DAYS EARLIER THAN Presto	ARMACK 2 = ROSNER 3 = PATHFINDER
1 0 5 CM. HIGH IN Southeast U.S.  4 1 = DWARF 2 = SEMIDWARF 3 = SHORT  4 = MIDTALL 5 = TALL  1 0 CM. SHORTER THAN Florico 1 = CARMACK 2 = ROSNER 3 = PATHFINDER  CM. TALLER THAN 4 = 6TA 204 5 = ARAMADILLA  5. PLANT COLOR AT BOOT STAGE:  2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN  6. STEM:  2 Anthocyanin: 1 = ABSENT 2 = PRESENT  2 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE 4 = HEAVY  2 Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:	7 DAYS LATER THAN Florico	TA 204 5 = ARMADILLA
1 0 5 CM. HIGH IN Southeast U.S.  4 1 = DWARF 2 = SEMIDWARF 3 = SHORT  4 = MIDTALL 5 = TALL  1 0 CM. SHORTER THAN Florico 1 = CARMACK 2 = ROSNER 3 = PATHFINDER  CM. TALLER THAN 4 = 6TA 204 5 = ARAMADILLA  5. PLANT COLOR AT BOOT STAGE:  2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN  6. STEM:  2 Anthocyanin: 1 = ABSENT 2 = PRESENT  2 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE 4 = HEAVY  2 Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:	4 HEIGHT:	
CM. TALLER THAN	1 0 5 cm were in Southeast U.S. 4 1=DWAR	
5. PLANT COLOR AT BOOT STAGE:  2  1 = YELLOW GREEN  2 = GREEN  3 = BLUE GREEN  6. STEM:  2  Anthocyanin: 1 = ABSENT  2 = PRESENT  2  Neck Hairiness: 1 = NONE  2 = SLIGHT  3 = MODERATE  4 = HEAVY  2  Shape Of Neck: 1 = STRAIGHT  2 = WAVY  3 = OTHER (Specify)  7. LEAVES:	1 0 CM. SHORTER THAN Florico 1 = C/	ARMACK 2 = ROSNER 3 = PATHFINDER
2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN  6. STEM: 2 Anthocyanin: 1 = ABSENT 2 = PRESENT  2 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE 4 = HEAVY  2 Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:	CM. TALLER THAN	TA 204 5 = ARAMADILLA
2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN  6. STEM: 2 Anthocyanin: 1 = ABSENT 2 = PRESENT  2 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE 4 = HEAVY  2 Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:	5. PLANT COLOR AT BOOT STAGE:	
2 Anthocyanin: 1 = ABSENT 2 = PRESENT  2 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE 4 = HEAVY  2 Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:	2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN	
2 Anthocyanin: 1 = ABSENT 2 = PRESENT  2 Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE 4 = HEAVY  2 Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:	6. STEM:	
Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Specify)  7. LEAVES:		
7. LEAVES:	Neck Hairiness: 1 = NONE 2 = SLIGHT 3 = MODERATE	4 = HEAVY
7. LEAVES:	Shape Of Neck: 1 = STRAIGHT 2 = WAVY 3 = OTHER (Sp	pecify)
	7. LEAVES:	•
		LEAF LENGTH: 1st Leaf Below Flag Leaf
Waxy Bloom On Leaf At Boot: 1 = ABSENT 2 = PRESENT  MM. LEAF WIDTH: 1st Leaf Below Flag Leaf	Waxy Bloom On Leaf At Boot: 1 = ABSENT 2 = PRESENT 1 0 MM	. LEAF WIDTH: 1st Leaf Below Flag Leaf
	2 Leaf Carriage: 1 = UPRIGHT 2 = RECURVED 2 Auricle Colo	

ORM GR-470-33 (Page 2) [Reverse)
8. HEAD:
3 Density: 1 = LAX 2 = MIDDENSE 3 = DENSE
2 Shape: 1 = FUSIFORM 2 = OBLONG 3 = CLAVATE 4 = ELLIPTICAL 5 = OTHER (Specify)
4 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETTED 3 = AWNLETTED 4 = AWNED
1 Awn Color: 1 = WHITE 2 = YELLOW 3 = TAN 4 = BROWN 5 = BLACK
1 0 CM. HEAD LENGTH 1 5 MM. HEAD WIDTH
9. GLUMES AT MATURITY:
3 Pubescence: 1 = GLABROUS 2 = SLIGHTLY PUBESCENT 3 = PUBESCENT
Color: 1 = WHITE 2 = YELLOW 3 = TAN 4 = BROWN 5 = BLACK
3 Length: 1 = SHORT 2 = MIDLONG 3 = LONG 2 Width: 1 = NARROW 2 = MIDWIDE 3 = WIDE
Shoulder: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED 3  Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE  4 = SQUARE 5 = ELEVATED 6 = APICULATE
10. COLEOPTILE COLOR:
1 = WHITE 2 = GREEN 3 = PURPLE
11. SEED:
3 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL
3 Smoothness: 1 = SMOOTH 2 = SLIGHTLY WRINKLED 3 = WRINKLED
3 Brush Area: 1 = SMALL 2 = MIDSIZE 3 = LARGE
2 Brush Length: 1 = SHORT 2 = MIDLONG 3 = LONG
Phenol Reaction: 1 = IVORY 2 = FAWN 3 = LIGHT BROWN 4 = BROWN 5 = BROWN BLACK
3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = BLACK 6 = OTHER (Specify)
3 5 GMS. PER 1,000 SEED
12. DISEASE (0 = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant):
0 STEM RUST (Races)
0 STRIPE RUST (Raœ)0 ERGOT
POWDERY MILDEW
1 SEPTORIA 3 YELLOW DWARF
OTHER (Specify)OTHER (Specify)
13. INSECT (O = Not Tested, 1 = Susceptible, 2 = Resistant, 3 = Tolerant): HESSIAN FLY RACE: 0
O GREENBUG A B C
CEREAL LEAF BEETLE D F G
1 OTHER (Specify) corn Borer

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	VARIETY
PLANT TILLERING	
WINTER HARDINESS	Stan II
AREA OF ADAPTATION	Florico & Stan II
SEED SHAPE	

## REFERENCES:

L. W. Briggle and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, USDA.

W. E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, Contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts.

#### COMMENTS:

Table 3 Heading Date of 498 vs Other Triticale Grown in Southeast U.S.

	498	Florico	Presto
	Day	s after March 31	2/73
Orangeburg, S. Carolina			
1995	11.5	3.0	21.0
Clemson, S. Carolina		,	•
1994	14	7	NA
Laurenburg, N. Carolina			
1995	13.8	7.5	26.0
3			
AVG	. 13	6	24

Table 4

## Height of 498 vs Florico Triticale

•	498	Florico
	cm	
Blackville, S. Carolina		
1993	97	112
Clemson, S. Carolina		
1994	112	119
Florence, S. Carolina		
1994	124	130
1993	104	114
*	* •	
AVG	109	119

REPRODUCE LOCALLY. Include form number and date on all reproductions.	FORM APPROVED - OMB N	0. 0581-005	EXPIRES: 12-31-96	
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE	The following statements are mad 1974 (5 U.S.C. 552a) and the Pap	e in accordar erwork Reduc	ice with the Privacy Act of tion Act (PRA) of 1995.	
SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE	Application is required in order to	rder to determine if a plant variety protection		
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	S.C. 2421). Information is held confidential C. 2426).			
1. NAME OF APPLICANT(S)	2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIET	YNAME	
Resource Seeds, Inc.	XT498	498		
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)	5. TELEPHONE (include area code)		lude srez code)	
P.O. Box 1319	408-847-1051	408-84	/ <del>-</del> 0604	
Gilroy, CA 95021	7. PVPO NUMBER 960	0361		
8. Does the applicant own all rights to the variety? Mark an "X" in appropriate b	block. If no, please explain.	XYES	Пио	
		٠ ا		
			· · · · · · · · · · · · · · · · · · ·	
·				
9. Is the applicant (individual or company) a U.S. national or U.S. based company If no, give name of country	γ?	XYES	NO	
10. Is the applicant the original breeder? If no, please answer the following:		XYES	No	
<ul> <li>a. If original rights to variety were owned by individual(s):</li> <li>Is (are) the original breeder(s) a U.S. national(s)? If no, give name of c</li> </ul>	country			
· · · · · · · · · · · · · · · · · · ·				
		<u></u>		
b. If original rights to variety were owned by a company: Is the original breeder(s) U.S. based company? If no, give name of company?	untry	YES		
11. Additional explantion on ownership (If needed, use reverse for extra space):				
PLEASE NOTE:				
Plant variety protection can be afforded only to owners (not licensees) who meet o	one of the following criteria:			
<ol> <li>If the rights to the variety are owned by the original breeder, that person must of a country which affords similar protection to nationals of the U.S. for the sa</li> </ol>	be a U.S. national, national of a me genus and species.	UPOV mem	ber country, or national	
<ol> <li>If the rights to the variety are owned by the company which employed the orig nationals of a UPOV member country, or owned by nationals of a country which genus and species.</li> </ol>	inal breeder(s), the company mus	it be U.S. bi	ased, owned by a U.S. for the same	
3. If the applicant is an owner who is not the original breeder, both the original breeder.	eeder and the applicant must me	et one of the	a above criteria.	
The original breeder may be the individual or company who directed final breed definition.	ding. See Section 41(a)(2) of the	he Plant Va	riety Protection Act for	

Public reporting burden for this collection of information is estimated to everage 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gethering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Agriculture, Clearance Officer, OIRM, AG Box 7630, Jamie L Whitten Building, Washington, D.C. 20250. When replying, refer to OMB No. 0581-0055 and form number in your letter.

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